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L4            57 S GETAUTIS ?/AU
L5            36 S L2 AND L3 AND L4
L6          1086 S ?DIHYDRAZON?
L7             3 S L5 AND L6
L8            64 S ?ORGANOPHOTORECEPT? OR ?ORGANO(2A)PHOTORECEPT?
L9            26 S L5 AND L8
L10            3 S L7 AND L9
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=> d l20 1-6 cbib abs hitstr hitrn

L20 ANSWER 1 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2005:1170498 Document No. 143:429998 Hydrazone-based charge transport materials. Tokarski, Zbigniew; Jubran, Nusrallah; Stanisauskaite, Albina; Sidaravicius, Jonas; Gaidelis, Valentas; Getautis, Vytautas; Jankauskas, Vygintas; Daskeviciene, Maryte; Montrimas, Edmundas (Samsung Electronics Co., Ltd., S. Korea). Eur. Pat. Appl. EP 1591837 A1 20051102, 29 pp. DESIGNATED STATES: R: AT, BE, CH, DE,

DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU. (English). CODEN: EPXXDW. APPLICATION: EP 2005-252725 20050429. PRIORITY: US 2004-2004/836667 20040430.

AB Organophotoreceptors comprising an elec. conductive substrate and a photoconductive element on the elec. conductive substrate, the photoconductive element comprising: (a) a charge transport material having the formula Y1C(R3):NN(R1)X1ZX2N(R2)N:C(R4)Y2 [R1, R2 = alkyl, alkenyl, alkynyl, arom., heterocyclic group; R3, R4 = H, alkyl, alkenyl, alkynyl, arom., heterocyclic group; X1, X2 = linking group; Y1, Y2 = arylamino group; Z is a bridging group]; and (b) a charge generating compd. Corresponding electrophotog. apparatuses and imaging methods (processes) are described, as are charge transport materials.

IT **868171-07-7P 868171-08-8P 868171-09-9P**
868171-10-2P 868171-11-3P
(hydrazone-based charge transport materials)

RN 868171-07-7 ZCAPLUS

CN INDEX NAME NOT YET ASSIGNED

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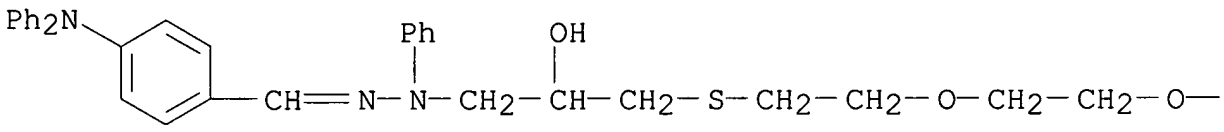

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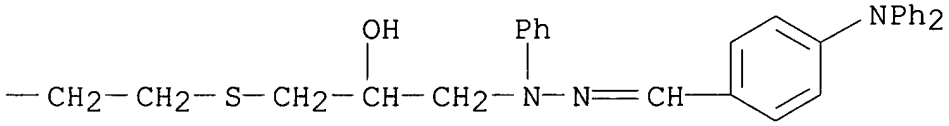
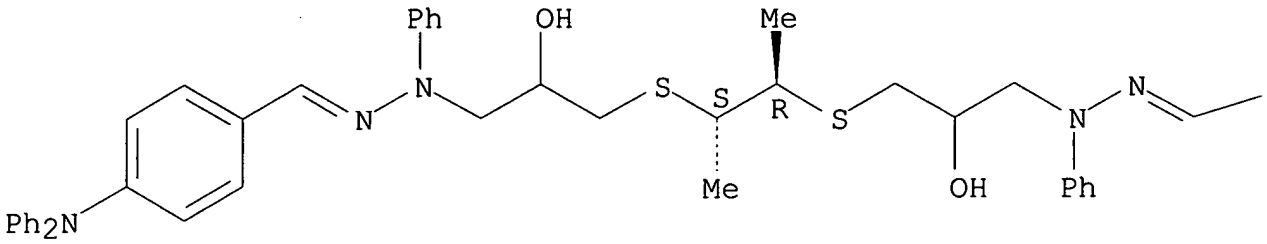


RN 868171-08-8 ZCAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, [[(1R,2S)-1,2-dimethyl-1,2-ethanediyl]bis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone), rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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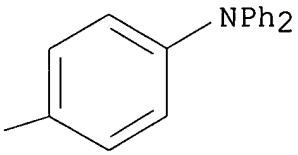
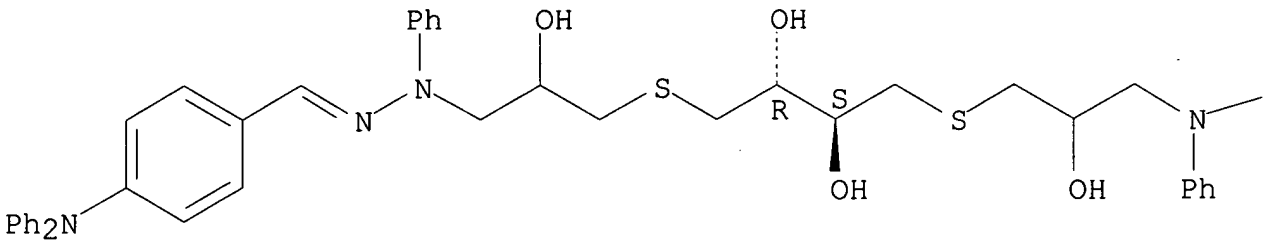


RN 868171-09-9 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Relative stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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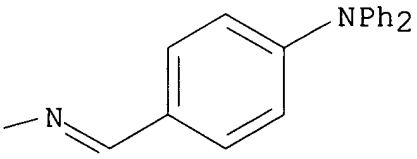
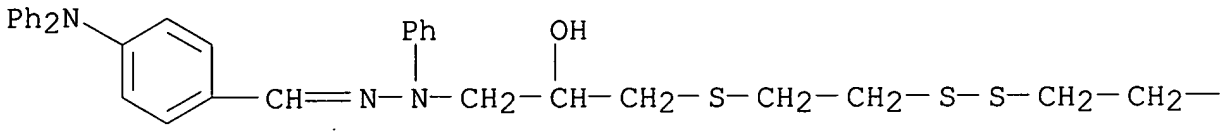


RN 868171-10-2 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



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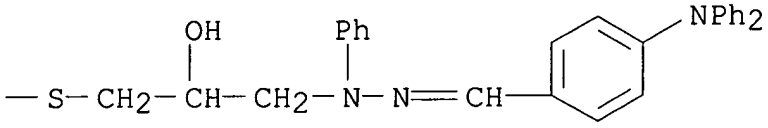
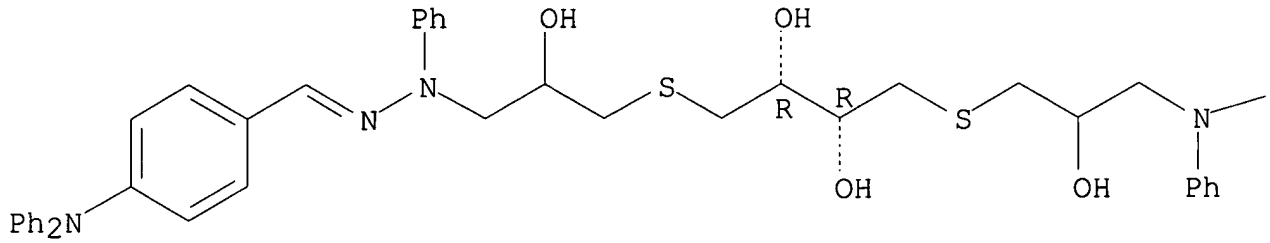


RN 868171-11-3 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED

Relative stereochemistry.
Double bond geometry unknown.

PAGE 1-A



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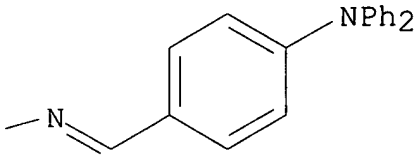


IT **868171-07-7P 868171-08-8P 868171-09-9P**

868171-10-2P 868171-11-3P
(hydrazone-based charge transport materials)

L20 ANSWER 2 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2005:582506 Document No. 143:115341 Preparation of organophotoreceptors with charge transport materials having three linked hydrazone groups. Tokarski, Zbigniew; Paulauskaite, Ingrida; Sidaravicius, Jonas; Jubran, Nusrallah; Jankauskas, Vygintas; Getautis, Vytautas (Samsung Electronics Co., Ltd., S. Korea). Eur. Pat. Appl. EP 1550653 A1 20050706, 25 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU. (English). CODEN: EPXXDW. APPLICATION: EP 2004-257415 20041130. PRIORITY: US 2003-2003/749418 20031231.

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

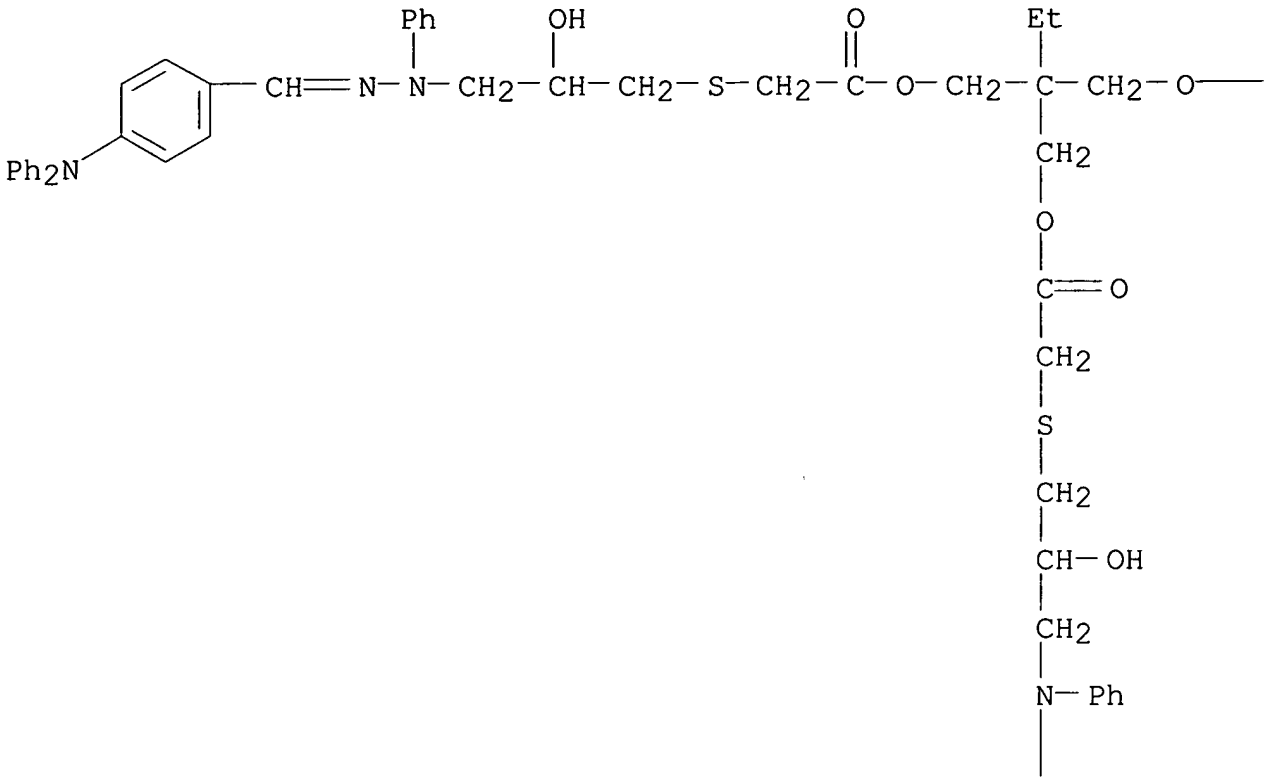
AB The present invention provides an organophotoreceptor comprising an elec. conductive substrate and a photoconductive element on the elec. conductive substrate. The photoconductive element comprises linked hydrazones of formula [Y-C(R2):N-NR1-X1-C(R3)(OH)-CR4R5-X2]nZ [n = 3-6; R1, R2 = independently H, alk(en)yl, aryl, heterocyclyl; R3-R5 = independently H, SH, OH, NH2, NO2, etc.; X1, X2, Z = independently branched or linear linking alkylene group (CH2)m where 1 or more of the methylene groups are optionally replaced; m = 1-20; Y = arylamine group, such as carbazole, julolidine, or (N,N-disubstituted)arylamine group] and a charge generating compd. Thus, condensation of PhNNH2 with 4-(diphenylamino)benzaldehyde, and reaction with epichlorohydrin gave epoxypropyl hydrazone I. Reaction of I with trimethylolpropane tris(2-mercaptoacetate) gave the three linked hydrazone II. Charge mobility measurements and ionization potentials of the prepd. linked hydrazones are given. Corresponding electrophotog. apparatuses, charge transport materials and imaging methods are also described.

IT **857520-85-5P 857520-86-6P 857520-87-7P**
(prepn. of organophotoreceptors with charge transport materials having three linked hydrazone groups)

RN 857520-85-5 ZCAPLUS

CN Acetic acid, [[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]-, 2-[[[[[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]acetyl]oxy]methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



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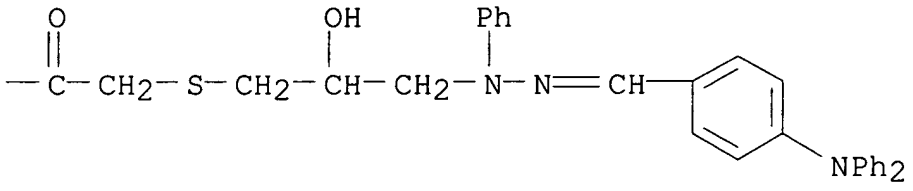

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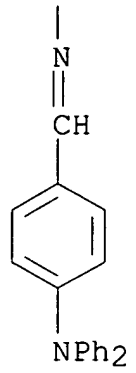
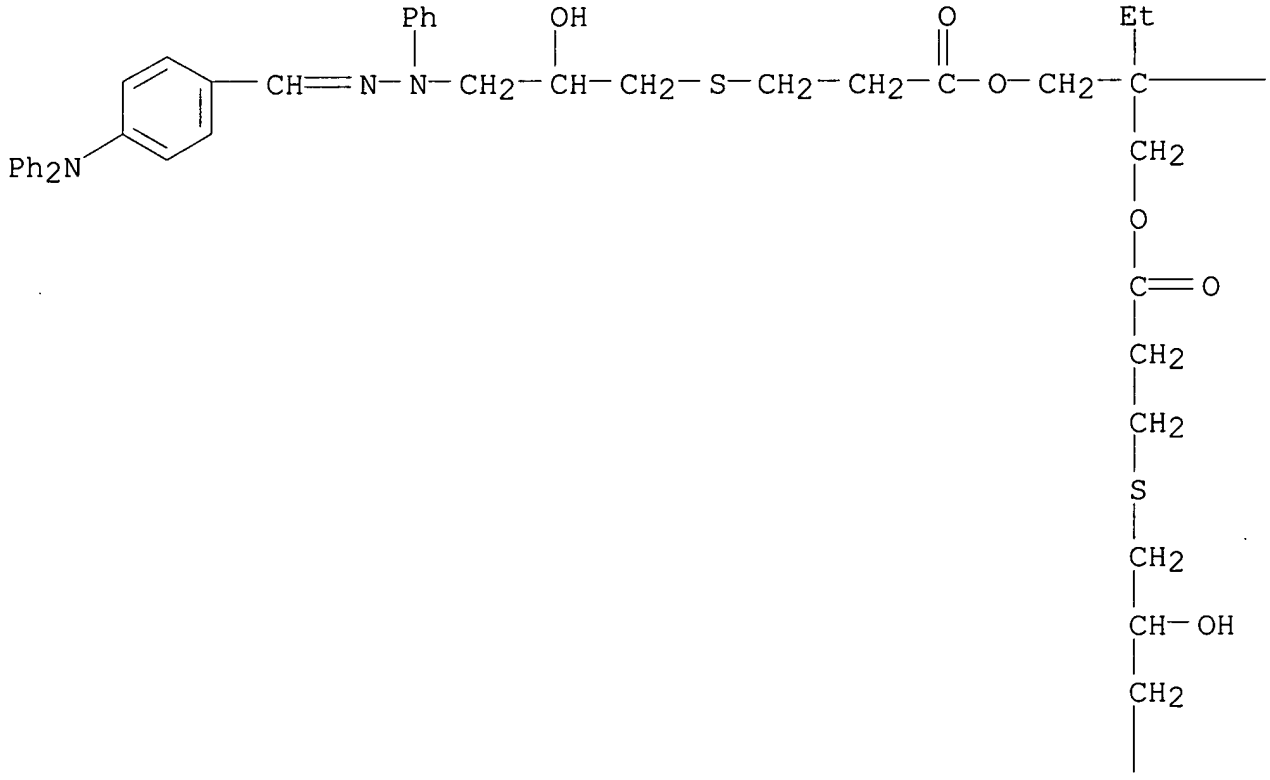


RN 857520-86-6 ZCAPLUS
CN Propanoic acid, 3-[[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]-, 2-[[3-[[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]-1-oxopropoxy]methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



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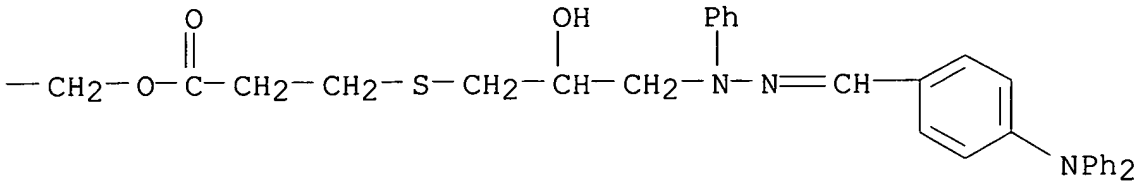

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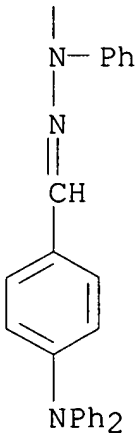
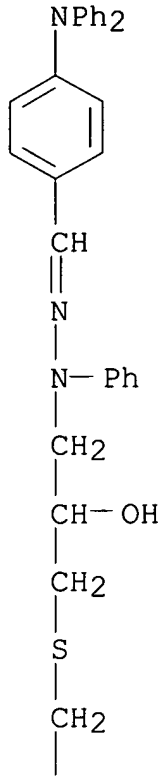


RN 857520-87-7 ZCAPLUS
CN Acetic acid, [[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]-, 2,2-bis[[[[[3-[[[4-(diphenylamino)phenyl]methylene]phenylhydrazino]-2-hydroxypropyl]thio]acetyl]oxy]methyl]-1,3-propanediyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



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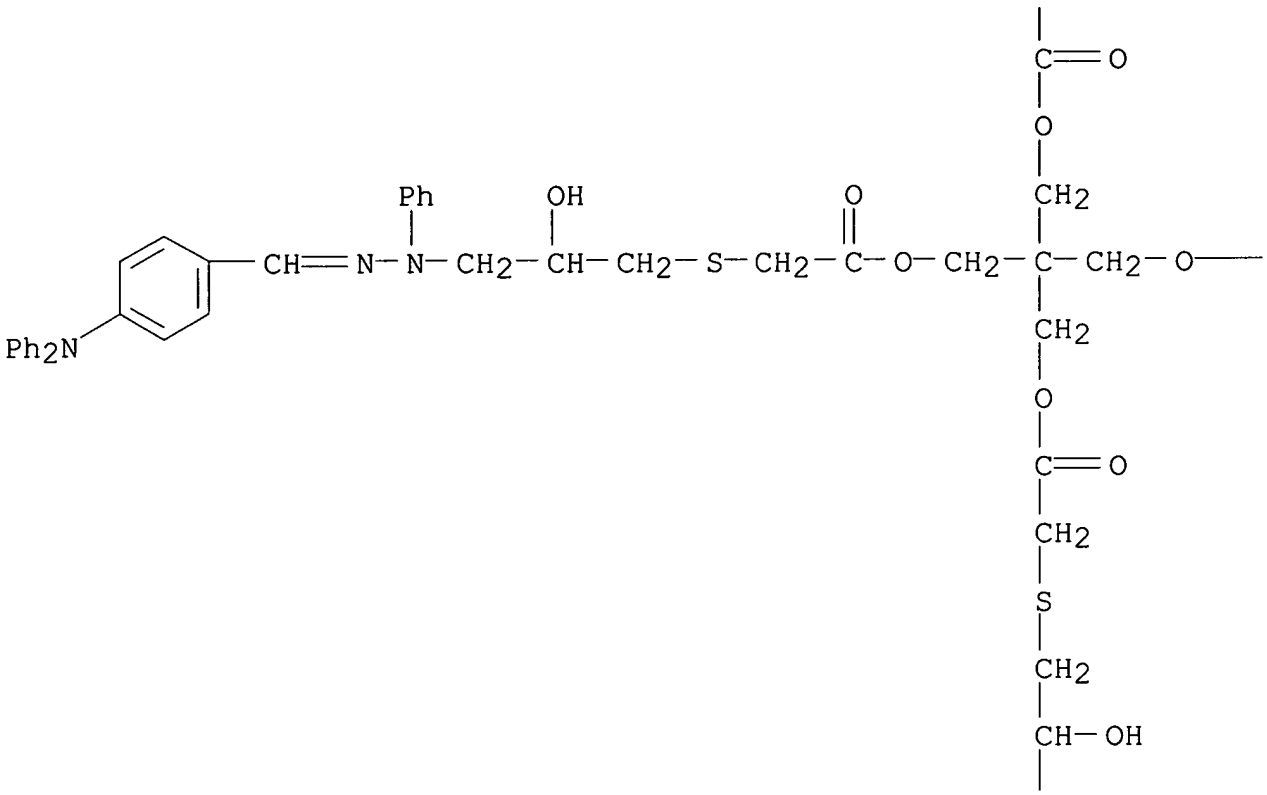

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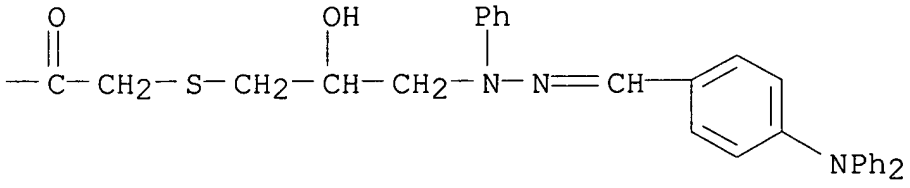

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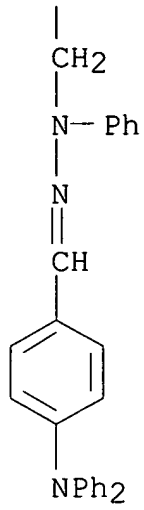


IT **857520-85-5P 857520-86-6P 857520-87-7P**
(prepn. of organophotoreceptors with charge transport materials having three linked hydrazone groups)

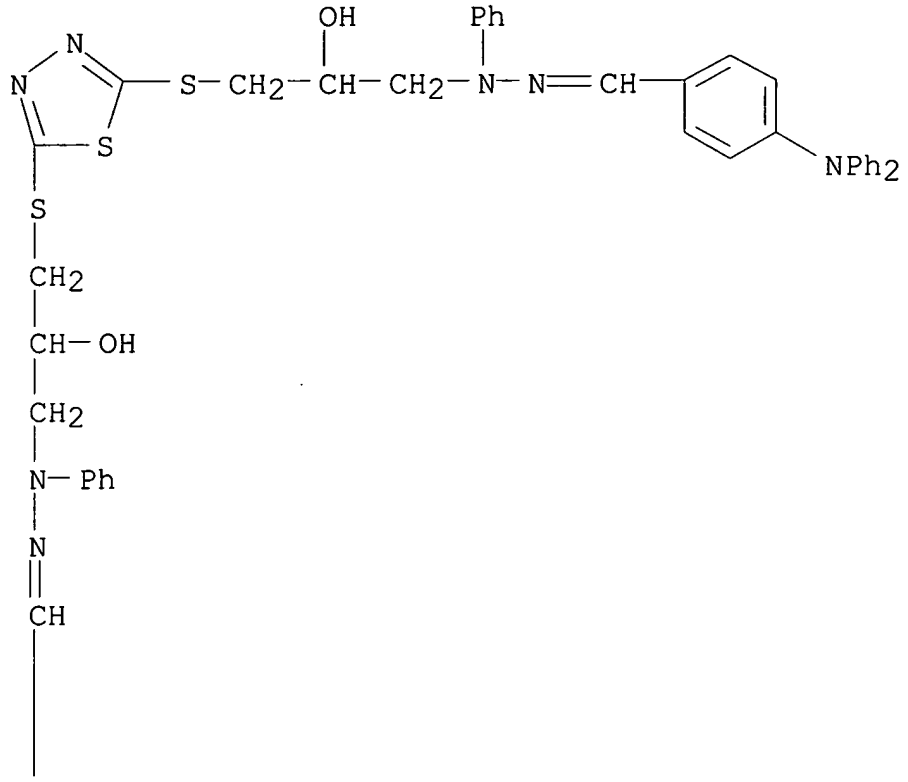
L20 ANSWER 3 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2005:238511 Document No. 142:306418 Linked dihydrazone-based charge transport compounds. Tokarski, Zbigniew; Jubran, Nusrallah; Getautis, Vytautas; Daskeviciene, Maryte; Jankauskas, Vygintas; Gavutiene, Janina (USA). U.S. Pat. Appl. Publ. US 2005058916 A1 20050317, 19 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-663278 20030916.

AB Improved organo photoreceptors comprise: (a) a charge transport compd. having the formula [X-(CH=CH)n-CH=N-NAr-A]2-B (n = integer 0, 1; X = (N,N-disubstituted)arylamine group; Ar = aryl group, heterocyclic group; A = first linking group with the formula -(CH2)p- which can be branched or linear; p = 3-20 inclusive and where one or more methylene groups can be optionally replaced by O, S, a carbonyl group, urethane, urea, an ester group, a -NR16 group, a CHR17 group, or a CR18R19 group where R16-19 = H, hydroxyl, thiol, an amine group, an alkyl group, an alkaryl group, an aryl group, or part of a ring; and B is a second linking group having the formula -Q-Z-Q'-, where Q and Q' are, independently, O, S, or NR1; R1 = H, an alkyl group, an alkaryl group or an aryl group; and Z comprises a heterocyclic group); (b) a charge generating compd.; and (c) an elec. conductive substrate over which said charge transport compd. and said charge generating compd. are located.

IT **790693-52-6P 790693-53-7P**
(linked dihydrazone-based charge transport compds. for electrophotog photoreceptors)

RN 790693-52-6 ZCAPLUS
CN Benzaldehyde, 4-(diphenylamino)-, 1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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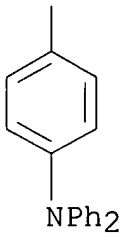
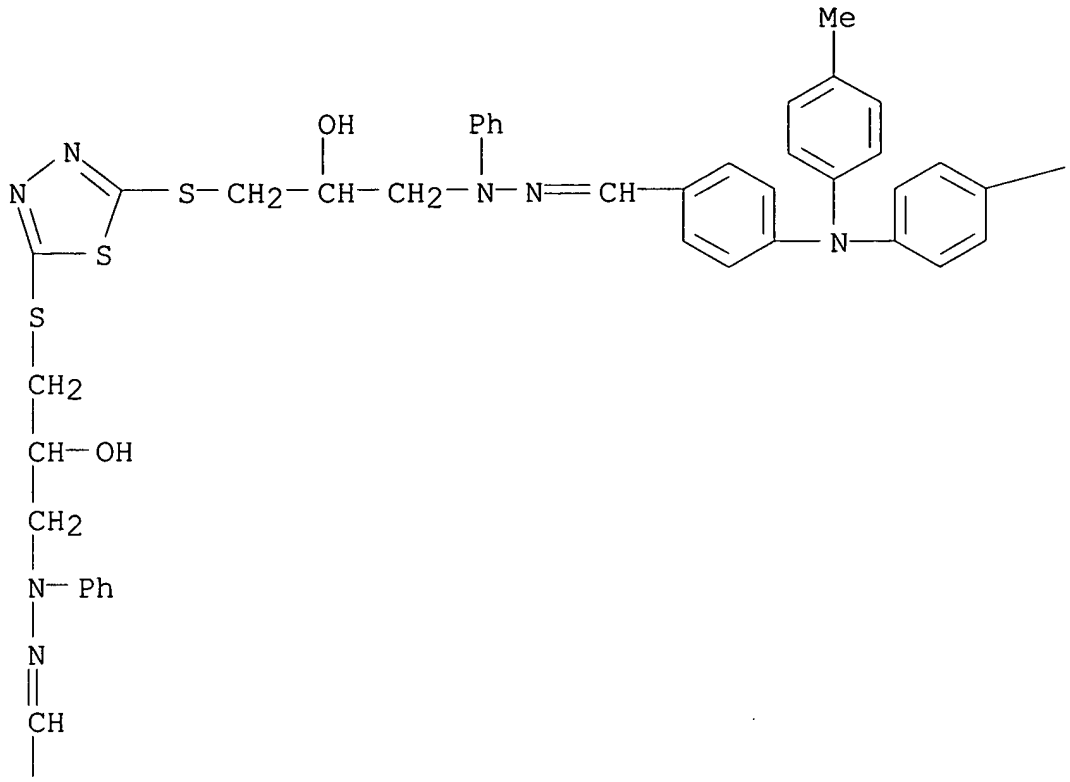


RN 790693-53-7 ZCAPLUS
CN Benzaldehyde, 4-[bis(4-methylphenyl)amino]-, 1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)]bis(phenylhydrazone) (9CI)

(CA INDEX NAME)

PAGE 1-A



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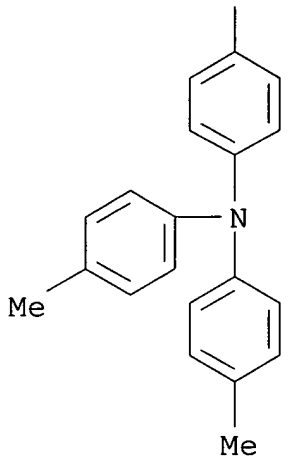
PAGE 2-A



IT **790693-52-6P 790693-53-7P**
(linked dihydrazone-based charge transport compds. for electrophotog photoreceptors)

L20 ANSWER 4 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2004:638573 Document No. 142:454186 Crosslinkable branched hydrazones as hole transporting materials. Getautis, V.; Paliulis, O.; Paulauskaite, I.; Galdelis, V.; Jankauskas, V.; Sidaravicius, J.; Tokarski, Z.; Law, K.; Jubran, N. (Faculty of Chemical Technology, Kaunas University of Technology, Kaunas, Lithuania). Journal of Imaging Science and Technology, 48(3), 265-272 (English) 2004. CODEN: JIMTE6. ISSN: 1062-3701. Publisher: Society for Imaging Science and Technology.

AB The new hole transport materials which comprise mols. consisting of two hydrazone branches linked by a central bridge contg. a flexible thiophenyl sulfide and two hydroxyl groups were synthesized and investigated. These transporting materials are low mol. wt. glasses and allow prepn. of layers stable to crystn. Ionization potential of the materials is in the range 5.03-5.38 eV. The highest hole mobility, reaching 10-4 cm2/Vs at 6 .times. 105 V/cm elec. field, was obsd. in the transport material with dimethyltriphenylamine or triphenylamine moieties. These transport materials can be used with or, in the case of a solid substrate, without polymer binder. They can be chem. crosslinked in the layer by reaction of the hydroxyl groups with polyisocyanates.

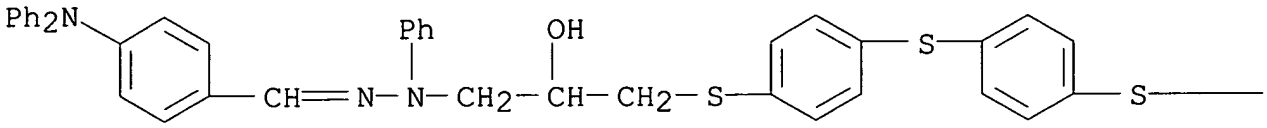
IT **851308-68-4P 851308-69-5P**
(synthesis and properties of crosslinkable branched hydrazones hole transporting materials for electrophotog.)

RN 851308-68-4 ZCAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, [thiobis[4,1-phenylenethio(2-

hydroxy-3,1-propanediyl]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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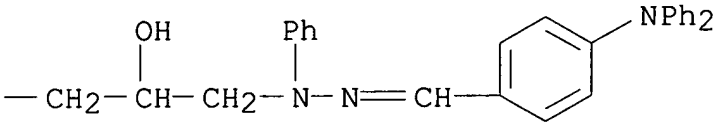
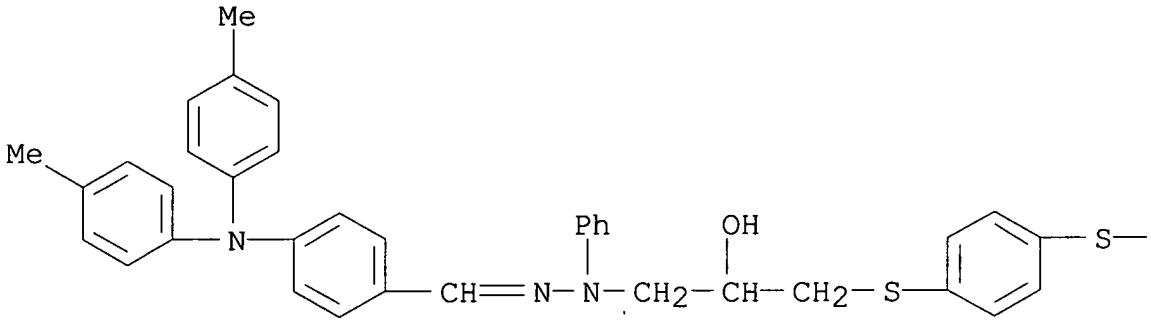


RN 851308-69-5 ZCAPLUS
CN Benzaldehyde, 4-[bis(4-methylphenyl)amino]-, [thiobis[4,1-phenylenethio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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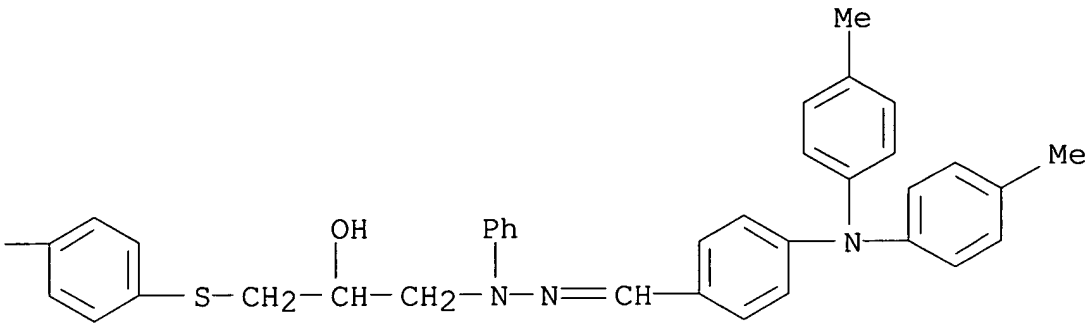


IT **851308-68-4P 851308-69-5P**
(synthesis and properties of crosslinkable branched hydrazones hole transporting materials for electrophotog.)

L20 ANSWER 5 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2004:610813 Document No. 141:395492 Synthesis of new branched hydrazones as potential hole-transporting materials. Getautis, V.; Paliulis, O.; Degutyte, R.; Paulauskaite, I. (Kaunas University of Technology, Kaunas, LT-3028, Lithuania). Chemistry of Heterocyclic Compounds (New York, NY, United States)(Translation of Khimiya Geterotsiklicheskikh Soedinenii), 40(1), 90-93 (English) 2004. CODEN: CHCCAL. ISSN: 0009-3122. OTHER SOURCES: CASREACT 141:395492. Publisher: Kluwer Academic/Consultants Bureau.

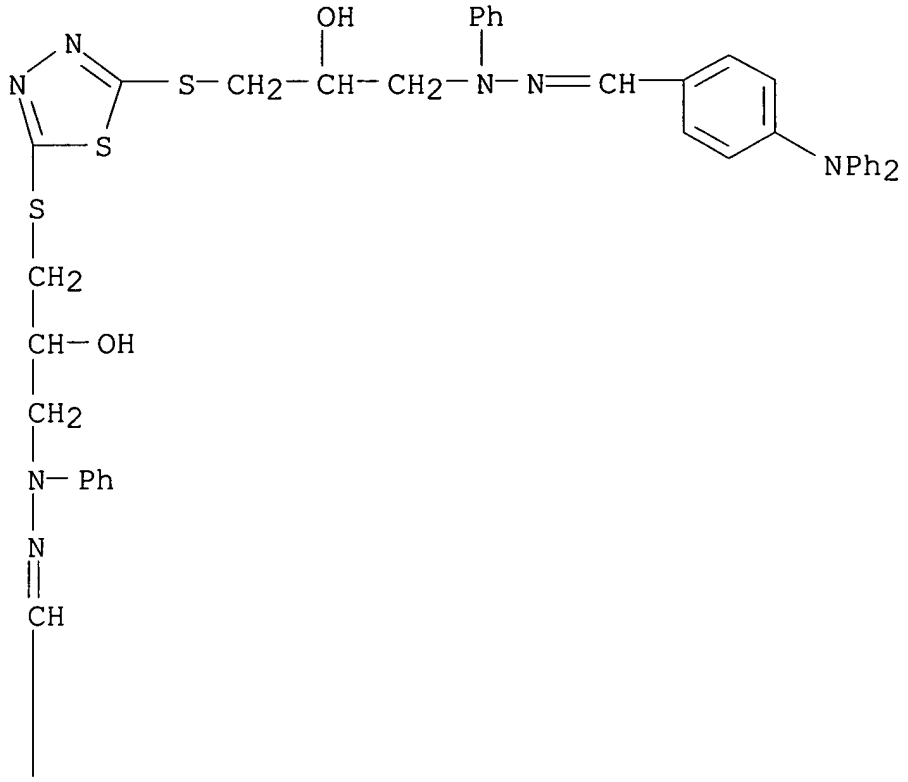
AB A new class of branched hydrazones was prepd. by the reaction of N-2,3-epoxypropylated N-phenylhydrazones contg. photoconductive groups with 2,5-dimercapto-1,3,4-thiadiazole in the presence of the catalyst triethylamine.

IT **790693-52-6P 790693-53-7P**
(prepn. of branched hydrazones as potential hole-transporting materials by reaction of N-2,3-epoxypropylated hydrazones with 2,5-dimercapto-1,,3,4-thiadiazole)

RN 790693-52-6 ZCAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, 1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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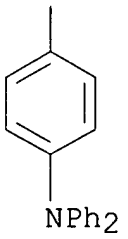
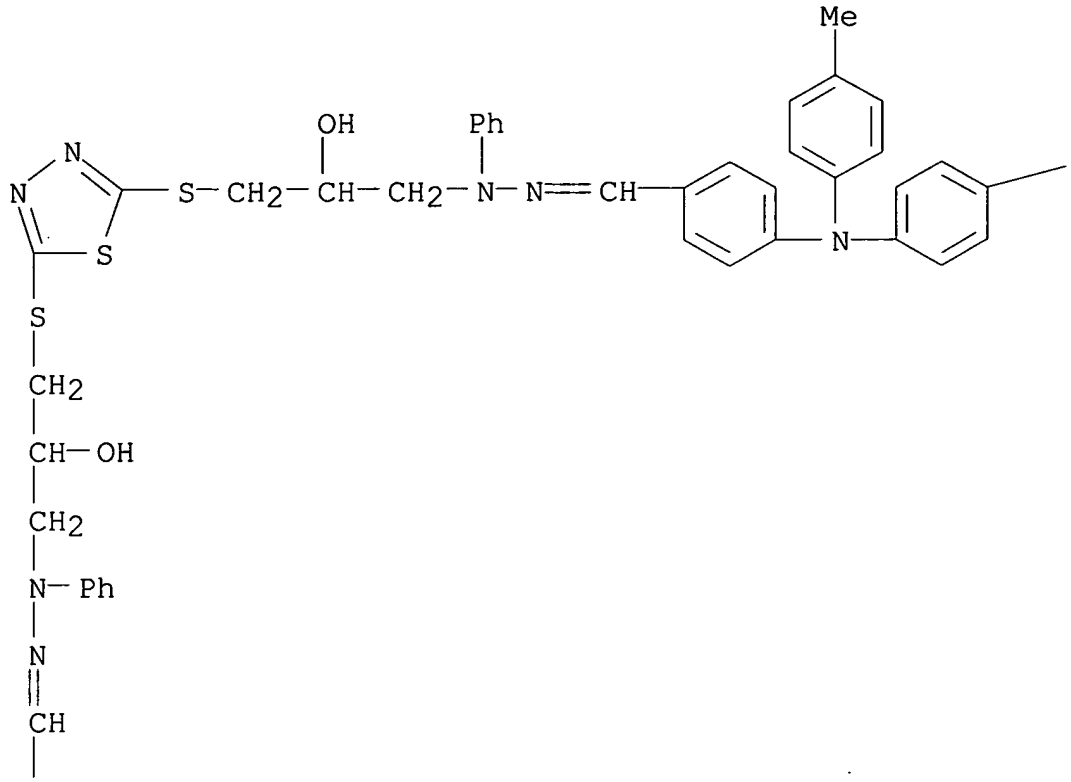


RN 790693-53-7 ZCAPLUS
CN Benzaldehyde, 4-[bis(4-methylphenyl)amino]-, 1,3,4-thiadiazole-2,5-diylbis[thio(2-hydroxy-3,1-propanediyl)]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

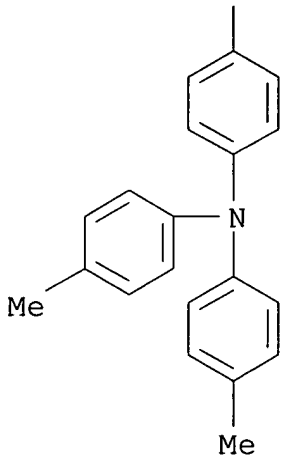
PAGE 1-A



PAGE 1-B

Me

PAGE 2-A



IT **790693-52-6P 790693-53-7P**
(prepn. of branched hydrazones as potential hole-transporting materials by reaction of N-2,3-epoxypropylated hydrazones with 2,5-dimercapto-1,,3,4-thiadiazole)

L20 ANSWER 6 OF 6 ZCAPLUS COPYRIGHT 2005 ACS on STN
2003:989977 Document No. 140:33646 Linked dihydrazone-based charge transport compounds for electrophotographic photoreceptor. Tokarski, Zbigniew; Jubran, Nusrallah; Getautis, Vytautas; Sidaravicius, Jonas V.; Montrimas, Edmundas; Daskeviciene, Maryte; Gaidelis, Valentas; Jankauskas, Vygintas; Stanisauskaite, Albina (Samsung Electronics Co., Ltd., USA). U.S. Pat. Appl. Publ. US 2003232261 A1 20031218, 25 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-431135 20030507. PRIORITY: US 2002-2002/PV385279 20020531.

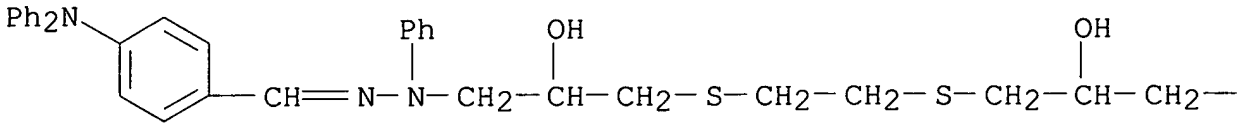
AB This invention relates to a novel organo photoreceptor that includes: (a) a charge transport compd. having the formula [X-(CH=CH)N-CH=N-N(Ar)-N-B-]2-A (n = 0, 1; X = (N,N-disubstituted)arylamine, a julolidine group, p-(N,N-disubstituted)arylamine group, an alkyldiarylamine or a dialkylarylamine); Ar = aryl, heterocyclic group; A = -S-(CH 2) m -S-; m = 1-15 integer; B = -(CH 2) p - where one or more methylene groups can be optionally replaced by O, S, a carbonyl group, etc.; p = 3-20 integer; (b) a charge generating compd.; and (c) an elec. conductive substrate over which the charge transport compd. and the charge generating compd. are located.

IT **634607-44-6P 634607-46-8P 634607-48-0P**
634607-51-5P 634607-53-7P 634607-55-9P
(charge transport compds. for electrophotog. photoreceptor)

RN 634607-44-6 ZCAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, [1,2-ethanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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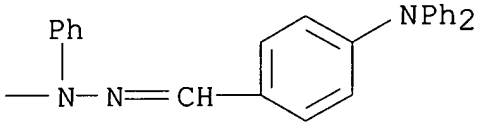
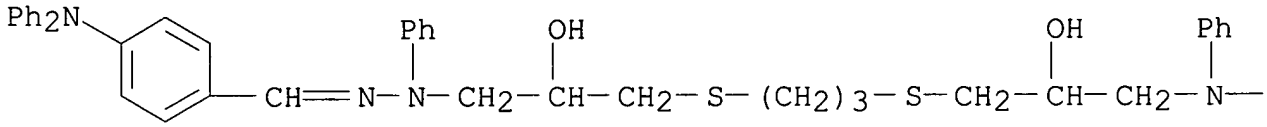


RN 634607-46-8 ZCAPLUS

CN Benzaldehyde, 4-(diphenylamino)-, [1,3-propanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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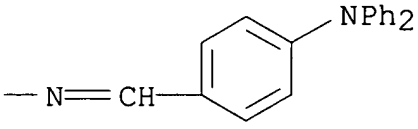

RN 634607-48-0 ZCAPLUS

CN Benzaldehyde, 4-[bis(4-methylphenyl)amino]-, [1,3-propanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

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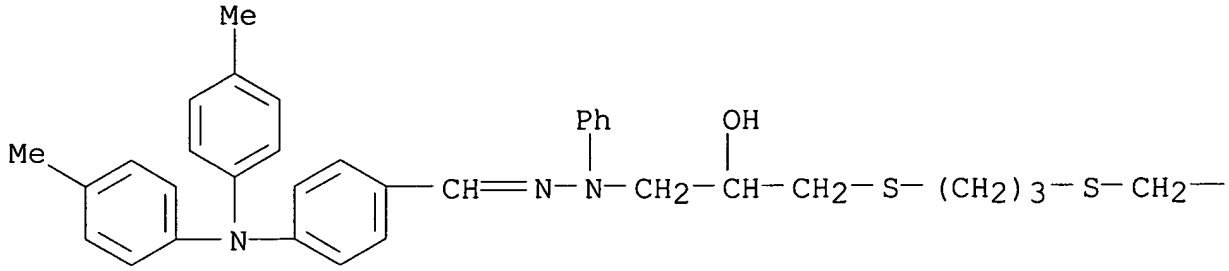

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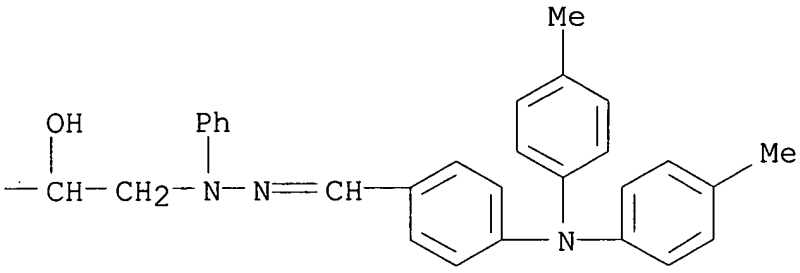
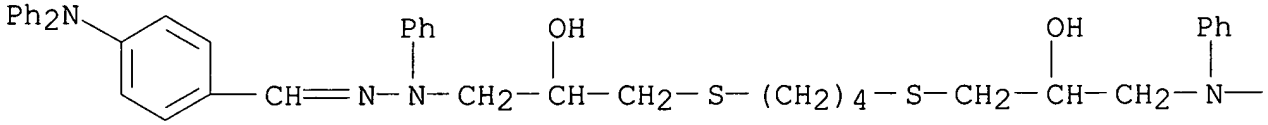


RN 634607-51-5 ZCAPLUS
CN Benzaldehyde, 4-(diphenylamino)-, [1,4-butanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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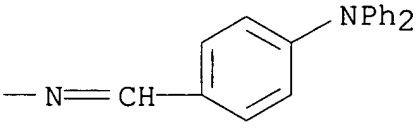
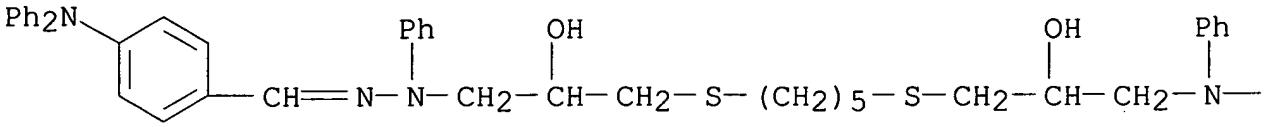


RN 634607-53-7 ZCAPLUS
CN Benzaldehyde, 4-(diphenylamino)-, [1,5-pentanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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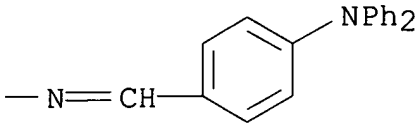
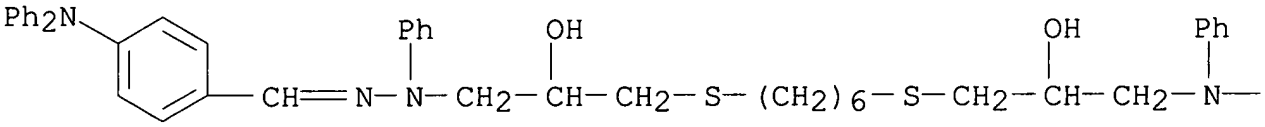


RN 634607-55-9 ZCAPLUS
CN Benzaldehyde, 4-(diphenylamino)-, [1,6-hexanediylbis[thio(2-hydroxy-3,1-propanediyl)]]bis(phenylhydrazone) (9CI) (CA INDEX NAME)

PAGE 1-A



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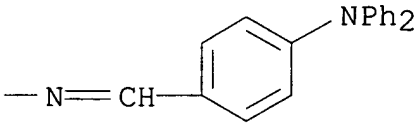

IT **634607-44-6P 634607-46-8P 634607-48-0P**
634607-51-5P 634607-53-7P 634607-55-9P
(charge transport compds. for electrophotog. photoreceptor)